SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

SFT501/G and SFT503/G SERIES

DESIGNER'S DATA SHEET

5 AMP 200 VOLTS PNP HIGH SPEED POWER TRANSISTOR

Part Number /Ordering Information 1/

SFT501 / G __ TX
SFT503 / G __ TX

- **Screening** 2/: _ = Not Screened, TX = TX Level, TXV = TXV Level, S = Space Level
- **Polarity:** _ = Normal, R = Reverse
- **Package:** 3/ G = Cerpack

FEATURES

- **BV_{CEO} 150V Minimum**
- **Fast Switching**
- **High Frequency, 80MHz Typical**
- **High Linear Gain (SFT503/G)**
- **Low Saturation Voltage and Leakage**
- **200°C Operating, Gold Eutectic Die Attach**
- **Designed for Complimentary Use with SFT502/G and SFT504/G**

MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Base Voltage	V_{CBO}	200	Volts
Collector-Emitter Voltage	V_{CEO}	150	Volts
Emitter-Base Voltage	V_{EBO}	7.0	Volts
Continuous Collector Current	I_C	5.0	Amps
Base Current	I_B	1.0	Amps
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200	°C
Total Device Dissipation @ T_C = 100°C Derate above 100°C	P_D	10 0.10	W W/°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.8	°C/W

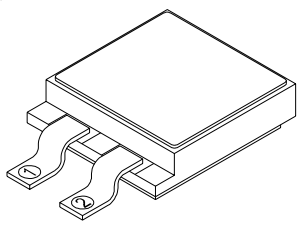
Available Part Numbers:

- **SFT501/G**
- **SFT503/G**
- **SFT501/GR**
- **SFT503/GR**

PIN ASSIGNMENT

CODE	FUNCTION	BASE	PIN 1	PIN 2
-	Normal	Collector	Emitter	Base
R	Reverse	Collector	Base	Emitter

Cerpack



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: TR0018C

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ELECTRICAL CHARACTERISTICS 4/		SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage (I_C = 50$_{mA}$)		BV_{CEO}	150	-	V
Collector-Base Breakdown Voltage (I_C = 200 µA)		BV_{CBO}	200	-	V
Emitter-Base Breakdown Voltage (I_E = 200 µA)		BV_{EBO}	7	-	V
Collector Cutoff Current (V_{CB} = 100 V_{DC})		I_{CBO}	-	500	nA
Collector Cutoff Current (V_{CE} = 100 V_{DC})		I_{CEO}	-	1	µA
Emitter Cutoff Current (V_{EB} = 6 V_{DC})		I_{EBO}	-	500	nA
DC Current Gain* (V_{CE} = 5.0V_{DC})					
(SFT501)	(I_C = 50 mA_{DC})	h_{FE}	20	-	
	(I_C = 2.5 A_{DC})		30	-	
	(I_C = 5.0 A_{DC})		20	-	
(SFT503)	(I_C = 50 mA_{DC})		50	-	
	(I_C = 2.5 A_{DC})		50	-	
	(I_C = 5.0 A_{DC})		40	-	
Collector-Emitter Saturation Voltage*	(I_C = 2.5 A_{DC}, I_B = 250 mA_{DC})	$V_{CE(SAT)}$	-	0.75	V_{DC}
	(I_C = 5.0 A_{DC}, I_B = 500 mA_{DC})			1.5	
Base-Emitter Saturation Voltage*	(I_C = 2.5 A_{DC}, I_B = 250 mA_{DC})	$V_{BE\ (SAT)}$	-	1.3	V_{DC}
	(I_C = 5.0 A_{DC}, I_B = 500 mA_{DC})			1.5	
Current Gain Bandwidth Product (I_C = 500 mA_{DC} , V_{CE} = 5 V_{DC}, f = 10 MHz)		f_T	70	-	MHz
Output Capacitance (V_{CB} = 10 V_{DC} , I_E = 0 A_{DC}, f = 1.0 MHz)		C_{ob}	-	225	pf
Input Capacitance (V_{BE} = 10 V_{DC} , I_C = 0 A_{DC}, f = 1.0 MHz)		C_{ib}	-	600	pf
Delay Time	(V_{CC} = 50 V_{DC} , I_C = 5 A_{DC}, I_{B1} = I_{B2} = 500 mA_{DC})	t_d	-	50	ns
Rise Time		t_r	-	250	ns
Storage Time		t_s	-	900	ns
Fall Time		t_f	-	300	ns

NOTES:

* Pulse Test: Pulse Width = 300 µs, Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screening per MIL-PRF-19500.

3/ For Package Outlines Contact Factory.

4/ All Electrical Characteristics @ 25°C, Unless Otherwise Specified.